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AUTHOR Cochran, Thomas R.; Felder, Nathaniel L.
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ABSTRACT

The development of a planning, budgeting, and evaluation model, referred to as an "academic audit" model, at the University of North Carolina, Asheville, is described. The model is essentially a model for planning resource reallocation in conjunction with redefining and reestablishing institutional goals and mission statements. Priorities for budgeting are set as a consequence or outcome of the auditing process. The model is cyclical in that an obvious outcome of the entire process would be a demonstrated need to perpetuate the model. The first phase of the model involves compiling extensive data on student enrollment patterns, grading tendencies of faculty, and other trends and merging that information with budget data such as faculty salaries and expenditures for equipment and supplies. The academic audits of each academic program would serve as the primary information source used by a joint faculty-administrative advisory committee in the second phase of the program, academic planning. Using the university's goals and objectives as a guide, recommendations could be made by the advisory committee as to the status of present programs, the need for any reallocation of funds, and the availability of monies for any new programs. Once their recommendations are considered and acted on, the third phase would be one of program evaluation and review. This stage essentially would entail annual updating of the initial academic audit, a review of the program's progress in achieving stated objectives, and recommending any changes in funding. A bibliography and audit program timetable adopted from the National Center for Higher Education Management Systems are appended. (Author/SW)

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ACADEMIC AUDIT: DEVELOPMENT OF A PLANNING, BUDGETING, AND EVALUATION MODEL FOR ACADEMIC PROGRAMS

Thomas R. Cochran and Nathaniel L. Felder
University of North Carolina at Asheville

The idea for applying the business concept of an audit to certain situations in higher education is not new. Harcleroad and Dickey (1975), are advocates of applying the processes inherent in the business audit to the study of institutions of higher education. Craven (1980), uses the term "program auditing" to describe an evaluation of the **program** evaluation process itself. The academic audit was developed by UNC-Asheville as a method in refining the planning and budgetting process of its academic programs. It is the development of this model that will occupy the body of this presentation.

Evaluation by its very name implies the making of judgments. These judgments can be objective, subjective, or preferably some combination of the two. The objective portion of an evaluation can take place after systematically collecting and organizing data which focuses on those variables identified as contributing to the needs of the university as reflected in statements of mission, goals and objectives. Various quality indicators should be

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defined and the appropriate data gathered, organized and analyzed. Recommendations based on the results of objective data should be made only after certain subjective data such as "reputation" has been considered. Reputation is the kind of subjective data which can contribute to high enrollments in a program which does not carry its weight on any of the objective criteria applied through various data based quality indicators (Austin & Solomon, 1981). Because reputation is in large measure a faculty dimension, systematic evaluation of faculty in relation to planning is very important (Felder & Blackburn, 1981). Academic program evaluation can be conducted successfully when objective and subjective data is considered in both the formative and summative stages of the evaluation process.

The formative stage of the evaluation process occurs in the beginning when the design of the evaluation project is conceptualized. The summative stage of the evaluation process occurs when the evaluation is completed and the audit is carried out. Thus the audit is intended to be a way for the academic decision makers or managers to determine the effectiveness of the evaluation process. The subsequent program decision actions should be predicated on the outcome of the audit. The academic audit then becomes a means of evaluating the evaluation process itself. The audit is integrally tied into the process so that evaluation becomes on-going and is essentially part of the

overall process of academic planning. (Long, 1980)

According to Craven (1980) an effective evaluation process should possess several attributes.

> First, the evaluation process must be approved by those directly interested in the program under review. The process must be academically credible and politically acceptable to them. Second, the report of evaluation findings, implications, and recommendations must be relevant to the decision issues that defined the evaluation need in the first place. The evaluation information must be valid, reliable, and timely. The study recommendations must be economically and politically feasible. The report form should promote an easy understanding of the information and facilitate its use in subsequent program decisions. Third, the results must be communicated to those in a position to make decisions regarding the given program....Finally, an integration of evaluation efforts with program planning and resource allocation activities should be sought through institutional policies and practices.... p.449.

The model presented here is designed to address the issues identified above. A description of the model for conducting an academic program audit follows.

Description of the Project

To initiate a planning, budgeting, and evaluating program, or as UNC-Asheville has, an academic audit, the university unit responsible for academic programming must first assess the status of each of its programs in relation to the university's overall mission. (Cyert, 1973) Too often the patterns of support for academic programs are quite arbitrary. Programs receive their previous year's allotment plus a percentage increase without any concern for program effectiveness or consistency with the university

mission. The first phase of this review program, i.e. academic audit, entailed an examination of the existing programs and their relatedness to the mission. The Southern Association Reaccreditation process provided a timely rationale for closer scrutiny of the academic programs.

The last ten years have brought about significant changes in the university. These changes have been incorporated into a revised and updated statement of the university's mission as part of our self-study for reaccreditation. The revised mission recognized the need for university to be more service-oriented and to offer more diversified, career-oriented academic programs sensitive to the needs of the community. The institution further learned from its self-study that its primary student market was no longer the traditional eighteen to twenty-two year old student. The average age is now 27, nearly 90% of the student body does not live on campus and most are part-time. These discoveries required that our academic programs be examined and an assessment made as to the need to eliminate old programs, establish new ones, and modify existing programs. Without a clear up-to-date picture of the character of a school and its objectives an academic audit serves little purpose other than to reinforce the status quo. Each program was evaluated from this newer perspective. (Bers, 1980)

The "academic audit" was approached from both a quantitative and qualitative standpoint. Four quantitative areas were considered relevant. First, productivity indices such as class size, credit hours generated, lower and upper division courses, and number of majors were used. This information presented a picture of the activity level and interest level on the part of students for a particular program. Second, output data was identified such as number of graduates, in order to monitor the success of a department in moving students through to graduation. Third, information was collected on the character of the faculty in each academic program. Factors such as highest earned degree, rank, tenure, scholarly activity and community and university service helped to describe what the faculty were engaged in. Finally, information on the resources required for a program were necessary. The level of operating expenditures and space requirements were two key elements. All of the quantitative data was then grouped together to provide a description of the efficiency level and effectiveness of each academic program.

Before the qualitative dimensions were considered the overall expansion or contraction of the university had to be understood. UNC-A has shown a steady growth rate for a number of years and projections for future years show the trend continuing. These growth trends impact significantly on the program appraisal process. The elimination of programs because of inefficiency, etc. is not nearly as significant

a question as the reallocation of resources to existing programs or the establishment of new ones. At institutions where enrollments are shrinking the issue is centered much more around the elimination of programs. Again these parameters must be understood before proceeding further in the assessment of academic programs. (Shirley & Volkwein, 1978)

Qualitative assessments of academic programs essentially entail making judgments as to a department or program's consistency with university aims. How "good" an academic program is aside from quantitative descriptions, is clearly a subjective appraisal that is difficult for a program to make of itself. (Webster, 1981) One method of assessing quality is to establish an advisory faculty group representative of the various programs to judge the effectiveness of academic programs. It is essential to the understanding of this model that one realize that decisions about academic programs should not be based solely on quantitative measures. Some allowance must be provided for qualitative factors as well. It is also important in the creation of a review body that the faculty perceive the group to be fair and representative. At UNC-Asheville the group was selected from the existing department and program heads. Each of the six members represented an academic area or division.

The qualitative model used by the faculty council at UNC-Asheville involves identifying a program maturity curve

for each program. Hollowood's (1979) life-cycle curve has been adapted for use at the department level. Each program is plotted in two-dimensional space looking at enrollment growth, i.e. majors and credit hours. The program is then placed in one of four categories, NEW -- programs that are recently established; GROWING -- programs that have shown consistent increases; STABLE -- programs that are maintaining a consistent enrollment; and DECLINING -- programs that have shown repeated drops in enrollment. (See Figure 1) Once a program's quantitative maturity curve has been established the program's qualitative position is then determined by the faculty council. This more qualitative dimension includes consideration of faculty quality, program breadth, special relationships, etc. Each department is then categorized as being in a dominant, strong, favorable, tenable, or weak position. Once determined a matrix can be established and each department placed in an appropriate category. (Figure 2)

The "academic audit" program can be expressed graphically in Figure 3.

To implement the program the first year all academic programs were allotted only 90% of their operating budget from the previous year. (Mursinger, 1980) This procedure was employed to remove some of the "slack" from the academic program system. Van Horn (1981) has noted that most all organizations have a certain amount of resources that are excessive for the effective operation of a program. It is

his contention that administrators should reduce these slack resources as much as possible. The modified zero-based figure of 90% was an effort to do that. The remaining 10% plus any additional monies due to increases in revenue served as the source of funds for the faculty council to distribute on the basis of program maturity and position. As part of the yearly evaluation and reallocation process associated with the academic audit any additional funds given in the prior year could be reclaimed and given to other programs in later years. This situation occurs most frequently in equipment purchases in which a program uses monies to purchase an item one year. Those funds can be used elsewhere in the next year.

This academic audit process provides the academic affairs area with considerable flexibility and insures that allocations can be tailored to changing needs for academic programs in a manner consistent with up-to-date university aims and ofjectives. A timetable used by UNC-Asheville is outlined in Table 1.

The Role of Institutional Research In The Academic Audit

The establishment of the analytical and information requirements for conducting a systematic academic program audit is an appropriate role for the institutional researcher. The specification of the appropriate data collection instruments and identifying the appropriate statistical technique used to determine and measure the quality parameters of the

academic programs is also a role easily fulfilled by the competent institutional researcher. However, the institutional researcher can only function to the extent that the manager solicits the involvement of the institutional research office. In most institutions of higher learning there are a number of faculty with data analysis and research design skills. The extent to which a faculty advisory group consisting of faculty with the requisite skills in research design and methodology can be used can be ascertained locally. Nonetheless, the institutional researcher is usually a person with a broad knowledge of the attendant considerations necessary to an effective audit. First, the institutional researcher has no vested interest in the outcome of the evaluation unless that person is also affiliated with the faculty of an academic department. Second, the IR person is usually the person with experience conducting evaluations within an investigatory framework outside of the political dynamics of the academic program. Third, the R office can better coordinate data collection and analysis within the framework of professional institutional research activity without it detracting from routine activities. Faculty for the most part require released time to devote to a project of this nature, whereas, the IR office should consider this project as routine. Fourth, the professional IR person can contribute to the credibility and acceptance of the findings of the audit because of the relative detach-

ment. Fifth, the professional IR person has a more global concept of the overall administrative aspects of academic programs than the average faculty person. This is particularly useful when combined with a basic understanding of the strengths and limitations of various possible approaches to academic program evaluation. Understanding the nature of the institution in which the audit is conducted enhances the likelihood of suggesting the best approach to an effective audit.

The office of institutional research has been involved in the development of the model presented here in a number of ways. The greatest extent of involvement came about as a consequence of direct interface during the conceptualization of the model. The administrator having the chief responsibility for the overall institutional and academic program evaluation process was involved in a continuing dialogue with the IR office concerning the appropriateness of the model design. The IR office was useful in helping to define and clarify issues, purposes, and processes used in the development of the model. Clearly articulating the objectives of the audit was also achieved as a consequence of interface between IR and academic affairs. The preparation and organization of initial audit data also helped academic affairs to better understand the nature of the decision-making alternatives relative to the evaluation objectives.

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TABLE I

The following timetable adopted from NCHEMS is used to carry out the audit program:

Month 1

- Mission
  - Review
  - Update
- Enrollment Projections (3-5 yrs)
  - Update
- Faculty Projections
  - Update (3-5 yrs)
- Revenue Projections
  - Update (3-5 yrs)

→ **Month 2-4**

- Appoint Faculty Council
- Prepare Quantitative Data
  - Academic Audit
  - Maturity Curve
- Finalize Projections
- Program Position
  - Update

Month 5

Submission of Program Plans

- Objectives
- Activities Planned

→ **Month 6-7**

Review of Program Plans

- Priorities Set
- Report Prepared

Month 8-10

Recommendations given to Institution-wide Planning Group

→ **Month 11-12**

Approval of Plans

- Implementation
- Resource Allocation